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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HAND, MELANIE JO

ART UNIT	PAPER NUMBER
	3761

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/817,390	SHAO, ZECHUAN
	Examiner Melanie J. Hand	Art Unit 3761

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-24 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 4/1/04 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4,7,10-13 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Shlenker et al (U.S. Patent No. 5,965,276).

With respect to **Claims 1,7**: Shlenker teaches a multilayer surgical glove comprising an outer latex material coated on the inside surface with a liquid absorbent polymer. A biocide mixed with polyethylene oxide and glycerin partially fills reservoir 54 located between inner and outer latex layers 56 and 60. Examiner asserts that because this composition comprises a biocide and glycerin that it is a therapeutic and moisturizing skin composition. The permeable layer 60 includes a layer with pores to allow the contents of the reservoir to pass through said porous layer over time and when stretched. Shlenker teaches spray coating as a method for applying the reservoir layer that includes the therapeutic biocide composition (Col. 7, lines 61-67, Col. 8, lines 1-7). Examiner asserts that spray coating the thickened biocide composition results in the composition being applied as droplets in an air stream, those droplets being thick enough to constitute a powder according to a definition of powder by Merriam-Webster:

Main Entry: ²**powder**

Function: *noun*

Usage: *often attributive*

1 : matter in a finely divided state : particulate matter

2 a : a preparation in the form of fine particles especially for medicinal or cosmetic use **b** : fine dry light snow
3 : any of various solid explosives used chiefly in gunnery and blasting

With respect to **Claims 2,3**: Shlenker teaches the use of hydrogel absorbent material. (Col. 9, lines 54-58).

With respect to **Claim 4**: Shlenker teaches a propenoic acid base hydrogel, 2-ethylhexyl acrylate, by reference to U.S. Patent No. 4,499,154 to James et al. ('276, Col. 9, lines 59,60, '154, Col. 1, lines 61-67)

With respect to **Claims 10,11**: Shlenker teaches polyurethane as a material for the outer and inner layers 56,60. (Col. 1, lines 37-39) Polybutadiene is a synthetic rubber, therefore Shlenker teaches polybutadiene as well.

With respect to **Claims 12,13**: Shlenker teaches forming a glove of the instant invention by the following steps: (1) dipping a clean heated former into a coagulating solution, (2) depositing onto a former uncured latex by dipping, (3) let stand and then leach with cold tap water and then drying the former with latex layer in an oven, (4) depositing a second layer of hydrogel polymer upon the first layer by dipping the former with first layer into the liquid polymer and/or biocide solution, (5) drying the former with the two layers, (6) dipping into uncured latex to form the third layer, and (7) drying the resulting three-layer structure to cure the latex. A biocide mixed with polyethylene oxide and glycerin partially fills reservoir 54 located between inner and outer latex layers 56 and 60. The permeable layer 60 includes a layer with pores to allow the contents of the reservoir to pass through said porous layer over time and when stretched. Shlenker teaches

that various equivalent methods are suitable for applying the reservoir layer that includes the therapeutic biocide composition, including spray coating (Col. 7, lines 61-67, Col. 8, lines 1-7) which, as Examiner asserted in the rejection of claim 1, creates a powder.

With respect to **Claim 23**: A process by its nature can either be performed manually or automatically via a production line, therefore Shlenker teaches this limitation.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 14-22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shlenker et al (U.S. Patent No. 5,965,276).

With respect to **Claims 14,22**: Shlenker, by reference to James, teaches stripping the glove from the former, powdering with corn starch and rinsing said glove in water and tumbling the

gloves in a aqueous N-cetylpyridinium chloride solution. Shlenker does not teach turning the glove inside out after it is stripped to extract excess water or leaving the cuff closed after extraction. Shlenker instead teaches heat drying as the drying method, which produces an equivalent result to extracting excess water, therefore it would be obvious to one of ordinary skill in the art to rinse the glove and extract excess water after stripping the glove as opposed to drying the glove after it has been stripped. See *In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) and *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP § 2113.

With respect to **Claim 15**: Shlenker does not teach, alone or by reference to James, a particular tumbling apparatus, however since Shlenker does teach tumbling the glove in the chloride solution, it would be obvious to one of ordinary skill in the art to tumble the glove in the biocide as opposed to dipping the former with latex layer into the biocide composition. Also, though Shlenker does not teach a particular tumbling apparatus, the end product, a latex glove with a biocide composition formed between two layers of latex, is identical to the product formed by the process taught by Shlenker. See *In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) and *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP § 2113.

With respect to **Claim 16**: Please see the rejection of Claim 12.

With respect to **Claim 17**: Shlenker teaches spray coating of the therapeutic biocide composition, which is capable of producing intermittent applications of such composition. Shlenker does not teach explicitly applying in at least four iterations for a duration of 5-10 seconds each. Applicant has not assigned any criticality to the number of iterations and duration

claimed. It would be obvious, therefore, to one of ordinary skill in the art to modify the spray coating process of Shlenker to involve at least four iterations at a duration of 5-10 seconds each, as Examiner asserts that this particular style of application (i.e. the iteration number and interval) is an optimization and thus unpatentable over the prior art of Shlenker. It has been held that where general conditions of claim are disclosed in prior art, it is not inventive to discover optimum or workable ranges by routine experimentation. See *In re Aller, Lacey and Hall* (105 USPQ 233, CCPA, 1955).

With respect to **Claims 18,19**: Shlenker does not teach applying a therapeutic composition that spreads during tumbling. Instead Shlenker teaches centrifugal coating (Col. 7, line 67), which involves depositing an amount of coating in a machine comprising a rapidly rotating disc or bell that propels the coating into the atmosphere. Examiner asserts that this very process occurs when one subjects a glove such as the one taught by Shlenker with a powder applied to it to a tumbling apparatus. Shlenker also teaches spray coating as previously discussed as an equivalent method of applying the therapeutic biocide composition. In the instant case substitution of equivalent methods requires no express motivation, as long as the prior art recognizes equivalency; *In re Fount* 213 USPQ 532 (CCPA 1982); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *Graver Tank & Mfg. Co. Inc. v. Linde Air Products Co.* 85 USPQ 328 (USSC 1950).

With respect to **Claim 20**: Shlenker, by reference to James, teaches tumbling the gloves dry at 65 degrees C after tumbling with chloride solution for 75 minutes. Shlenker does not teach drying at 55 degrees C. Applicant has not assigned a criticality for drying at 55 degrees as opposed to 65 degrees, therefore Examiner considers the limitation of drying at 55 degrees an

optimization of that variable and thus unpatentable over the prior art of Shlenker. It has been held that where general conditions of claim are disclosed in prior art, it is not inventive to discover optimum or workable ranges by routine experimentation. See *In re Aller, Lacey and Hall* (105 USPQ 233, CCPA, 1955). By virtue of teaching a time interval for the drying, Shlenker teaches removing the gloves into ambient conditions at the end of the time interval and thus teaches cooling to room temperature.

With respect to **Claim 21**: The biocide composition taught by Shlenker would continue to be absorbed by the glove as it lies adjacent the porous layer of permeable outer layer 60.

With respect to **Claim 24**: Shlenker teaches forming a glove of the instant invention by the following steps: (1) dipping a clean heated former into a coagulating solution, (2) depositing onto a former uncured latex by dipping, (3) let stand and then leach with cold tap water and then drying the former with latex layer in an oven, (4) depositing a second layer of hydrogel polymer upon the first layer by dipping the former with first layer into the liquid polymer and/or biocide solution, (5) drying the former with the two layers, (6) dipping into uncured latex to form the third layer, and (7) drying the resulting three-layer structure to cure the latex. A biocide mixed with polyethylene oxide and glycerin partially fills reservoir 54 located between inner and outer latex layers 56 and 60. The permeable layer 60 includes a layer with pores to allow the contents of the reservoir to pass through said porous layer over time and when stretched. Shlenker teaches that various equivalent methods are suitable for applying the reservoir layer that includes the therapeutic biocide composition, including spray coating (Col. 7, lines 61-67, Col. 8, lines 1-7) which, as Examiner asserted in the rejection of claim 1, creates a powder.

Shlenker, by reference to James, teaches stripping the glove from the former, powdering with corn starch and rinsing said glove in water and tumbling the gloves in a aqueous N-cetylpyridinium chloride solution. Shlenker does not teach turning the glove inside out after it is stripped to extract excess water or leaving the cuff closed after extraction. Shlenker instead teaches heat drying as the drying method, which produces an equivalent result to extracting excess water, therefore it would be obvious to one of ordinary skill in the art to rinse the glove and extract excess water after stripping the glove as opposed to drying the glove after it has been stripped. See *In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) and *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP § 2113.

Shlenker does not teach, alone or by reference to James, a particular tumbling apparatus, however since Shlenker does teach tumbling the glove in the chloride solution, it would be obvious to one of ordinary skill in the art to tumble the glove in the biocide as opposed to dipping the former with latex layer into the biocide composition. Also, though Shlenker does not teach a particular tumbling apparatus, the end product, a latex glove with a biocide composition formed between two layers of latex, is identical to the product formed by the process taught by Shlenker. See *In re Marosi*, 710 F.2d 799, 218 USPQ 289 (Fed. Cir. 1983) and *In re Thorpe*, 777 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). See also MPEP § 2113.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shlenker ('276) in view of Bourne (U.S. Patent No. 6,195,805).

With respect to **Claim 5**: Shlenker does not teach an elongation to break for the latex composition. Bourne teaches neoprene surgical gloves, neoprene being an analog to latex. Bourne teaches that the elongation to break of the neoprene is greater than 300%. ('805, Col. 5,

lines 60,61) Bourne teaches this particular elongation to break when the neoprene composition is used to fabricate surgical gloves, therefore it would be obvious to one of ordinary skill in the art to modify the composition of the glove taught by Shlenker to contain the analogous compatible neoprene composition taught by Bourne.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shlenker ('276) in view of Warren et al (U.S. Patent Application Publication No. 2003/0082219).

With respect to **Claim 6**: Shlenker does not teach a skin care comprised of any of the ingredients set forth in the group in claim 6. Warren teaches a skin care composition also based in polyethylene glycol and further containing vitamin C. ('219, ¶¶ 0034, 0035, 0046) Since the two compositions are substantially similar and compatible and vitamin C is taught by Warren as a skin care additive, it would be obvious to modify the biocide solution taught by Shlenker to contain vitamin C as taught by Warren.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shlenker ('276) in view of Dangman et al (U.S. Patent No. 5,335,373).

With respect to **Claims 8,9**: Shlenker does not teach polyacrylonitrile or polyvinyl chloride. Dangman teaches a surgical glove comprising two layers, an outer layer and an inner layer, comprised of substantially similar materials such as latex, polyvinyl chloride plastic and polyacrylonitrile plastic. ('373, Col. 20, line 64 – Col. 21, line 8). In the instant case substitution of equivalent methods requires no express motivation, as long as the prior art recognizes

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equivalency, *In re Fount* 213 USPQ 532 (CCPA 1982); *In re Siebentritt* 152 USPQ 618 (CCPA 1967); *Graver Tank & Mfg. Co. Inc. v. Linde Air Products Co.* 85 USPQ 328 (USSC 1950).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie J. Hand whose telephone number is 571-272-6464. The examiner can normally be reached on Mon-Thurs 8:00-5:30, alternate Fridays 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tatyana Zalukaeva can be reached on 571-272-1115. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Melanie J Hand
Examiner
Art Unit 3761

MJH

**TATYANA ZALUKAEVA
PRIMARY EXAMINER**

